

Abstract

5 A thin film magnetic media structure with a pre-seed layer of CrTi is disclosed. The CrTi pre-seed layer presents an amorphous or nanocrystalline structure. The preferred seed layer is RuAl for use with the CrTi pre-seed layer. The use of the CrTi/RuAl bilayer structure provides superior adhesion to the substrate and resistance to scratching, as well as, excellent coercivity and signal-
10 to-noise ratio (SNR) and reduced cost over the prior art. One embodiment of the invention sputter-deposits a CrTi pre-seed layer and a RuAl seed layer followed by at least one underlayer and at least one magnetic layer on a circumferentially polished substrate structure to achieve an Mrt orientation ratio greater than one. Two methods according to the invention allow the Mrt orientation ratio of the disk
15 to be adjusted or maximized by varying the thickness of the RuAl seed layer and/or altering the atomic percentage of titanium in the pre-seed layer.